FIG.1

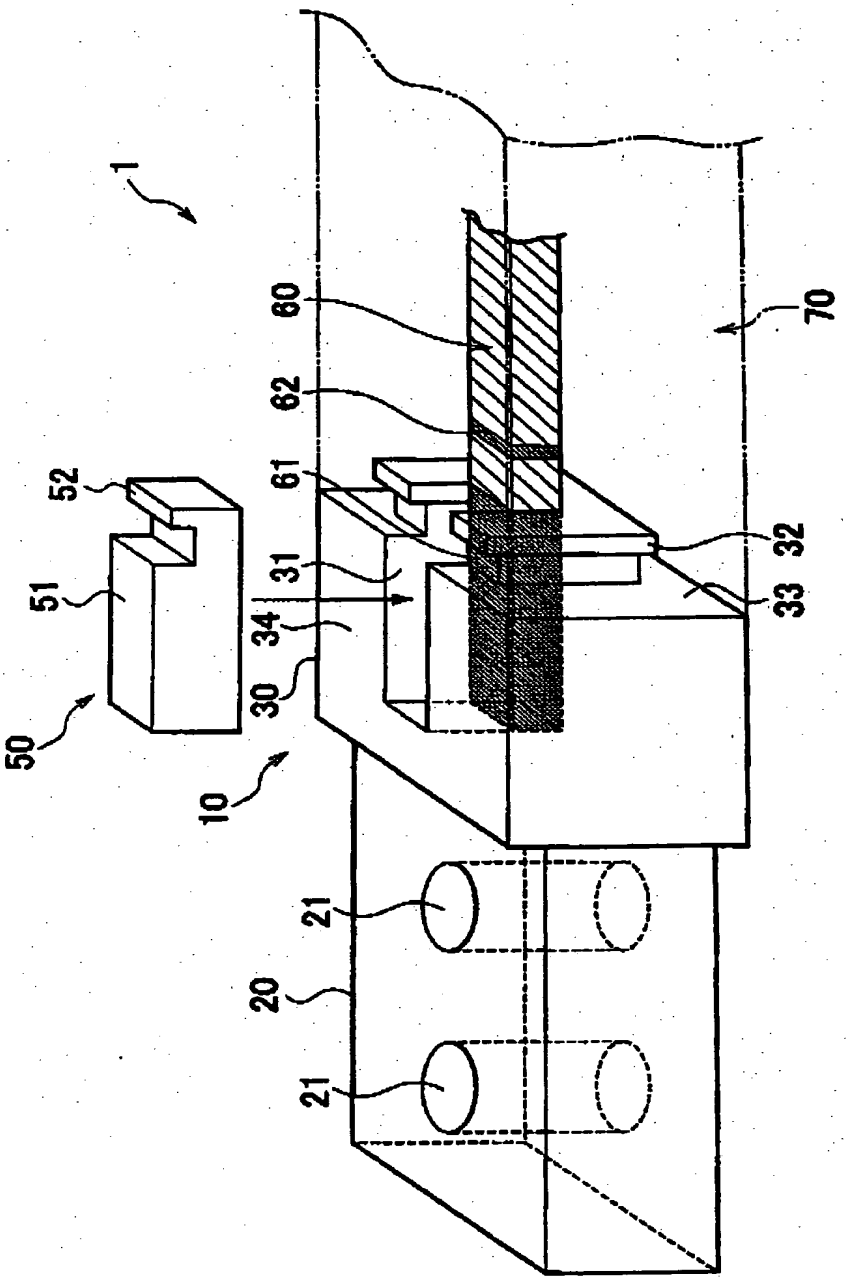

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FIG.2

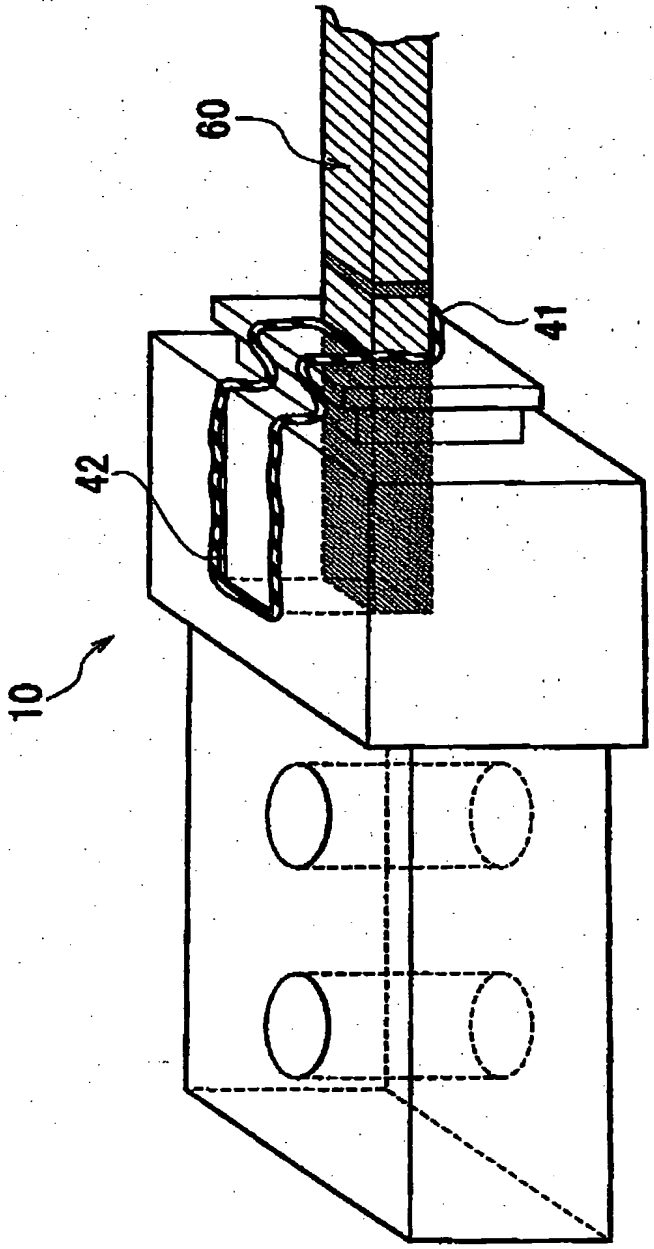

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FIG.3

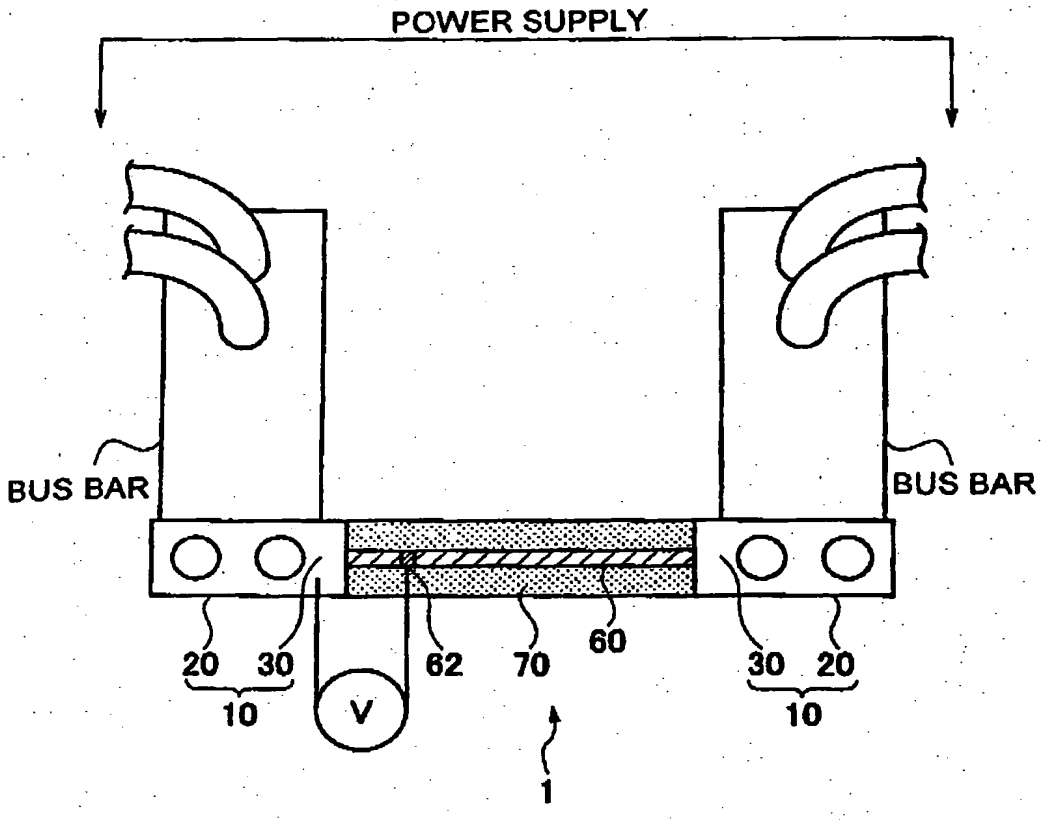

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FIG.4

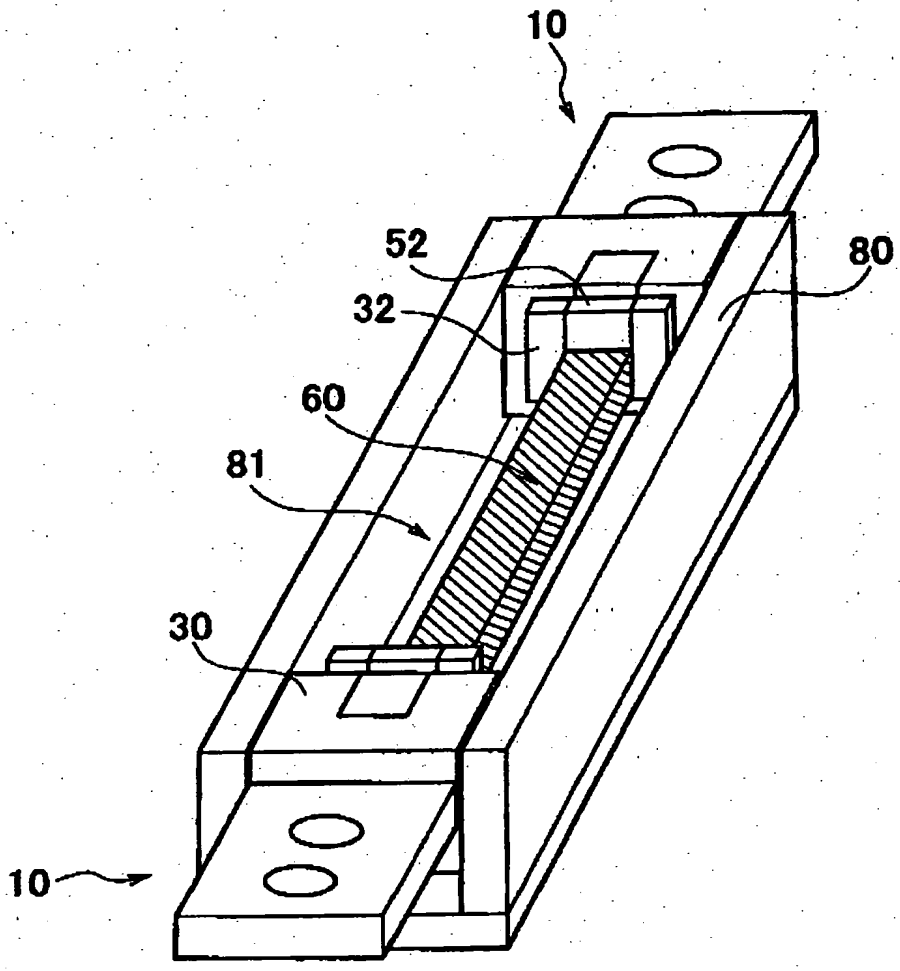

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FIG.5

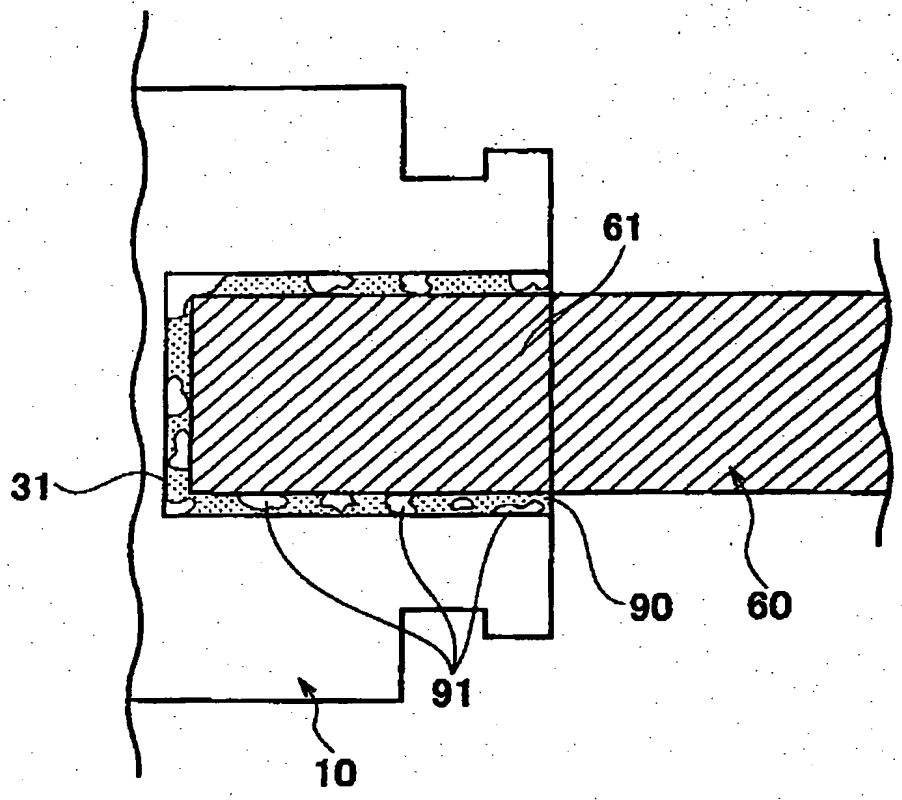

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FIG.6

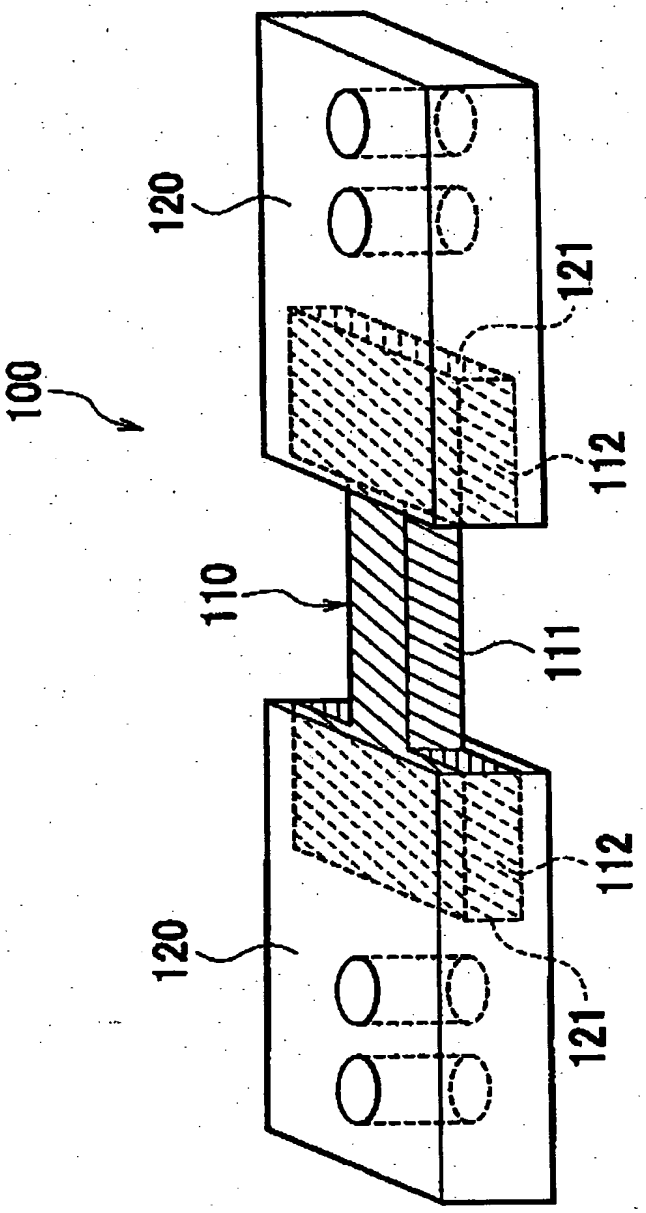

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FIG.7

		TREATMENT CONDITION	TREATMENT TEMPERATURE	HOLE VOLUME RATE	77 K CONTACT RESISTANCE VALUE
EXAMPLE 1	RIGHT	VACUUM DEGASSING + ULTRASONIC SOLDERING IRON TREATMENT	180℃	0.07%	0.19μΩ
EXAMPLE 1	LEFT	VACUUM DEGASSING + ULTRASONIC SOLDERING IRON TREATMENT	180℃	0.08%	0.19μΩ
EXAMPLE 2	RIGHT	VACUUM DEGASSING + ULTRASONIC SOLDERING IRON TREATMENT	180℃	0.10%	0.20μΩ
EXAMPLE 2	LEFT	VACUUM DEGASSING + ULTRASONIC SOLDERING IRON TREATMENT	180℃	0.10%	0.21μΩ
EXAMPLE 3A	RIGHT	VACUUM DEGASSING + ULTRASONIC SOLDERING IRON TREATMENT	180℃	0.06%	0.28μΩ
EXAMPLE 3A	LEFT	VACUUM DEGASSING + ULTRASONIC SOLDERING IRON TREATMENT	180℃	0.07%	0.29μΩ
EXAMPLE 3B	RIGHT	VACUUM DEGASSING + ULTRASONIC SOLDERING IRON TREATMENT	180℃	0.07%	0.30μΩ
EXAMPLE 3B	LEFT	VACUUM DEGASSING + ULTRASONIC SOLDERING IRON TREATMENT	180℃	0.08%	0.29μΩ
EXAMPLE 4	RIGHT	VACUUM DEGASSING + ULTRASONIC SOLDERING IRON TREATMENT	160℃	5%	0.30μΩ
EXAMPLE 4	LEFT	VACUUM DEGASSING + ULTRASONIC SOLDERING IRON TREATMENT	160℃	4%	0.27μΩ
COMPARISON EXAMPLE 1	RIGHT	ONLY ULTRASONIC SOLDERING IRON TREATMENT	160℃	30%	0.8μΩ
COMPARISON EXAMPLE 1	LEFT	ONLY ULTRASONIC SOLDERING IRON TREATMENT	160℃	35%	0.9μΩ
COMPARISON EXAMPLE 1	RIGHT	ONLY ULTRASONIC SOLDERING IRON TREATMENT	180℃	50%	1.2μΩ
COMPARISON EXAMPLE 1	LEFT	ONLY ULTRASONIC SOLDERING IRON TREATMENT	180℃	45%	1.1μΩ

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FIG.8 A

FIG.8 B
B TO B SECTION

FIG.8 C
C TO C SECTION

FIG.8 D
D TO D SECTION

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FIG.9 A

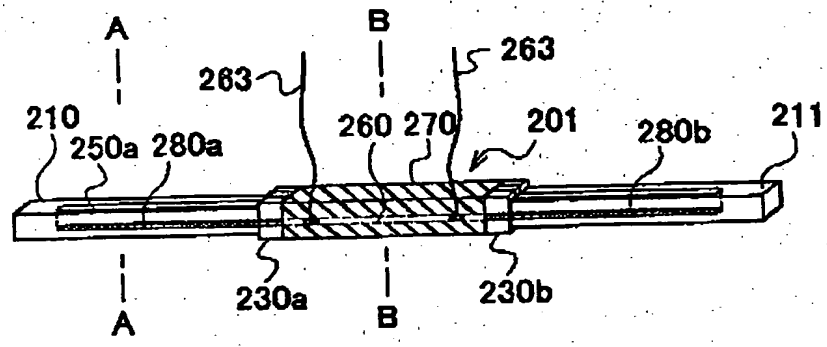

FIG.9 B
A TO A SECTION

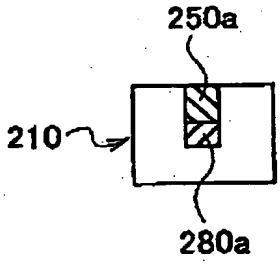

FIG.9 C
B TO B SECTION

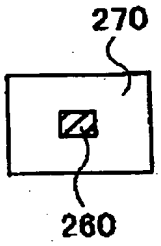

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FIG.10

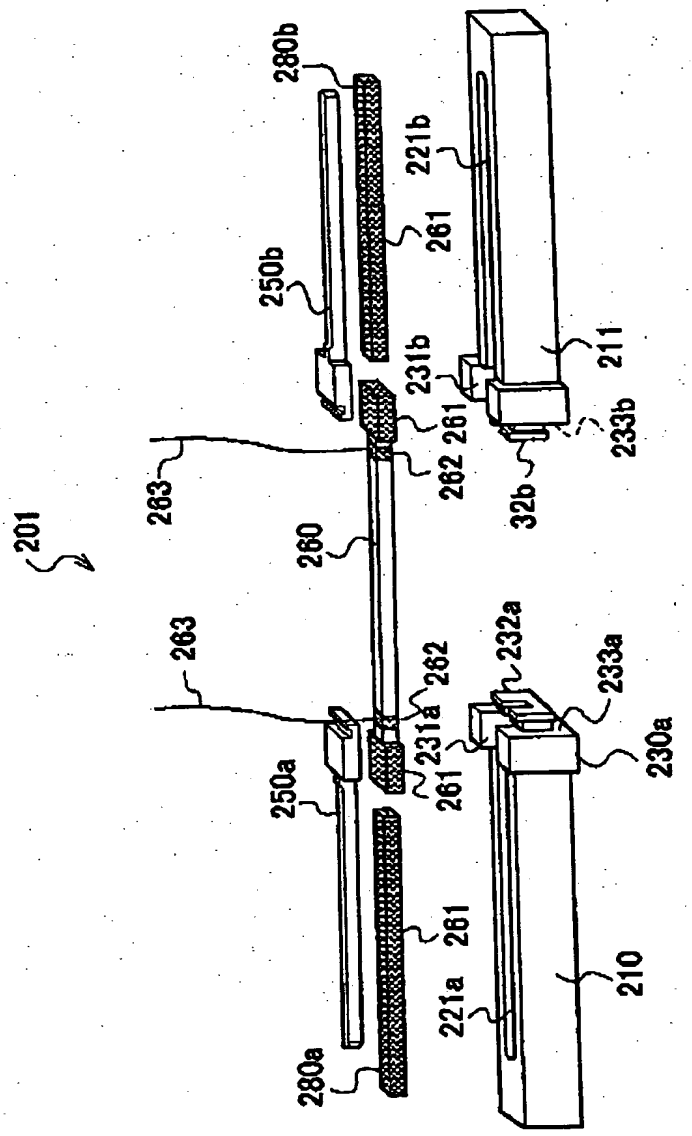

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FIG.11

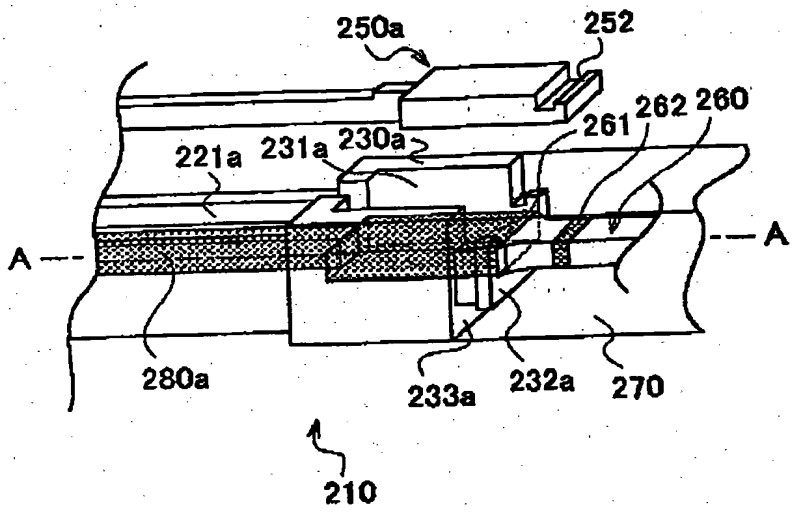

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FIG.12

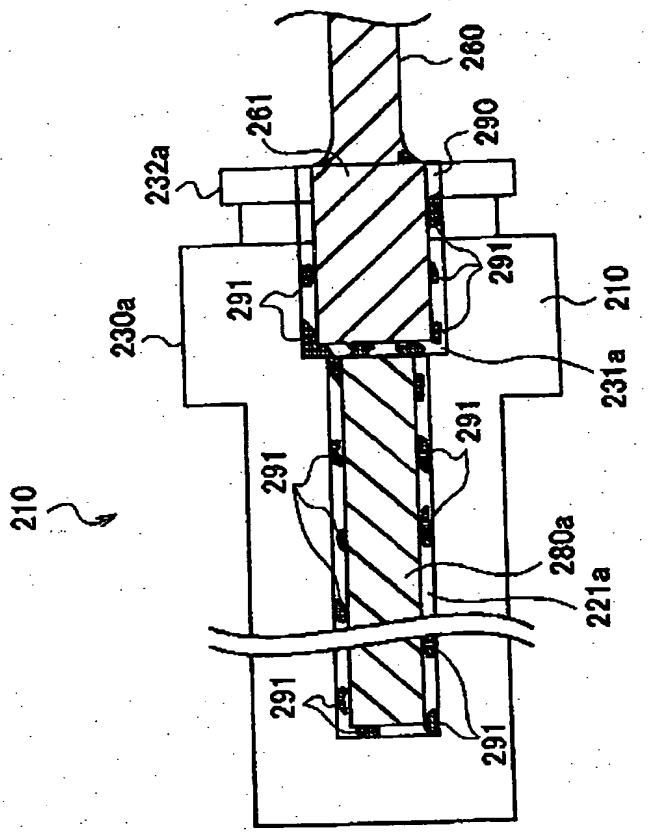

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FIG.13

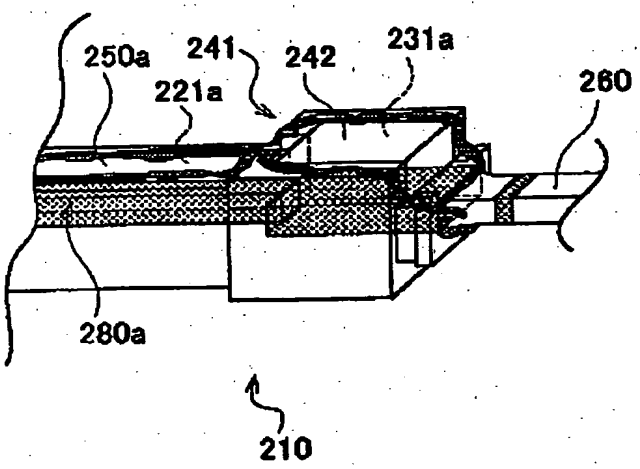

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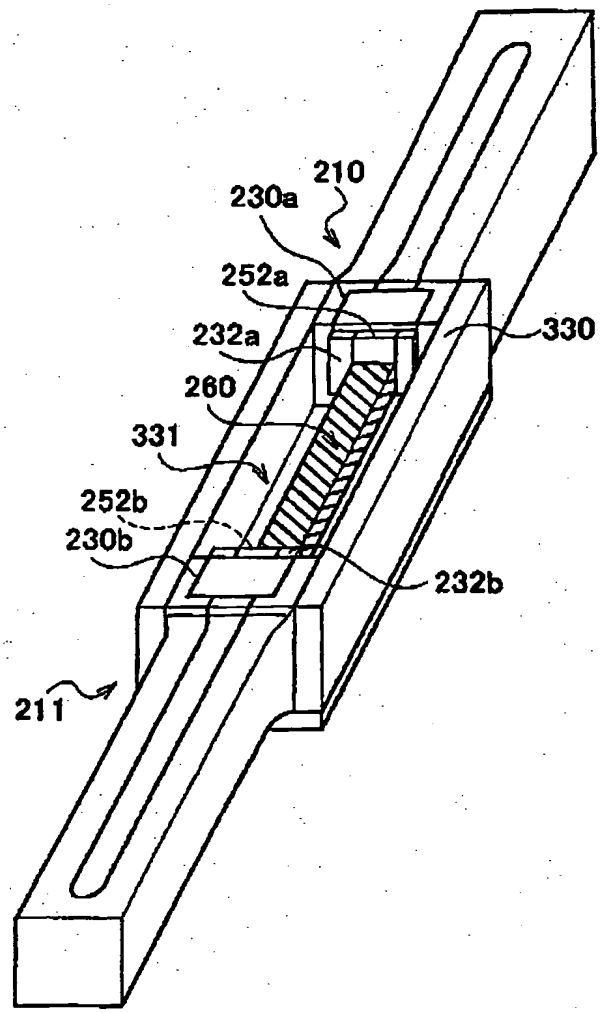
FIG.14



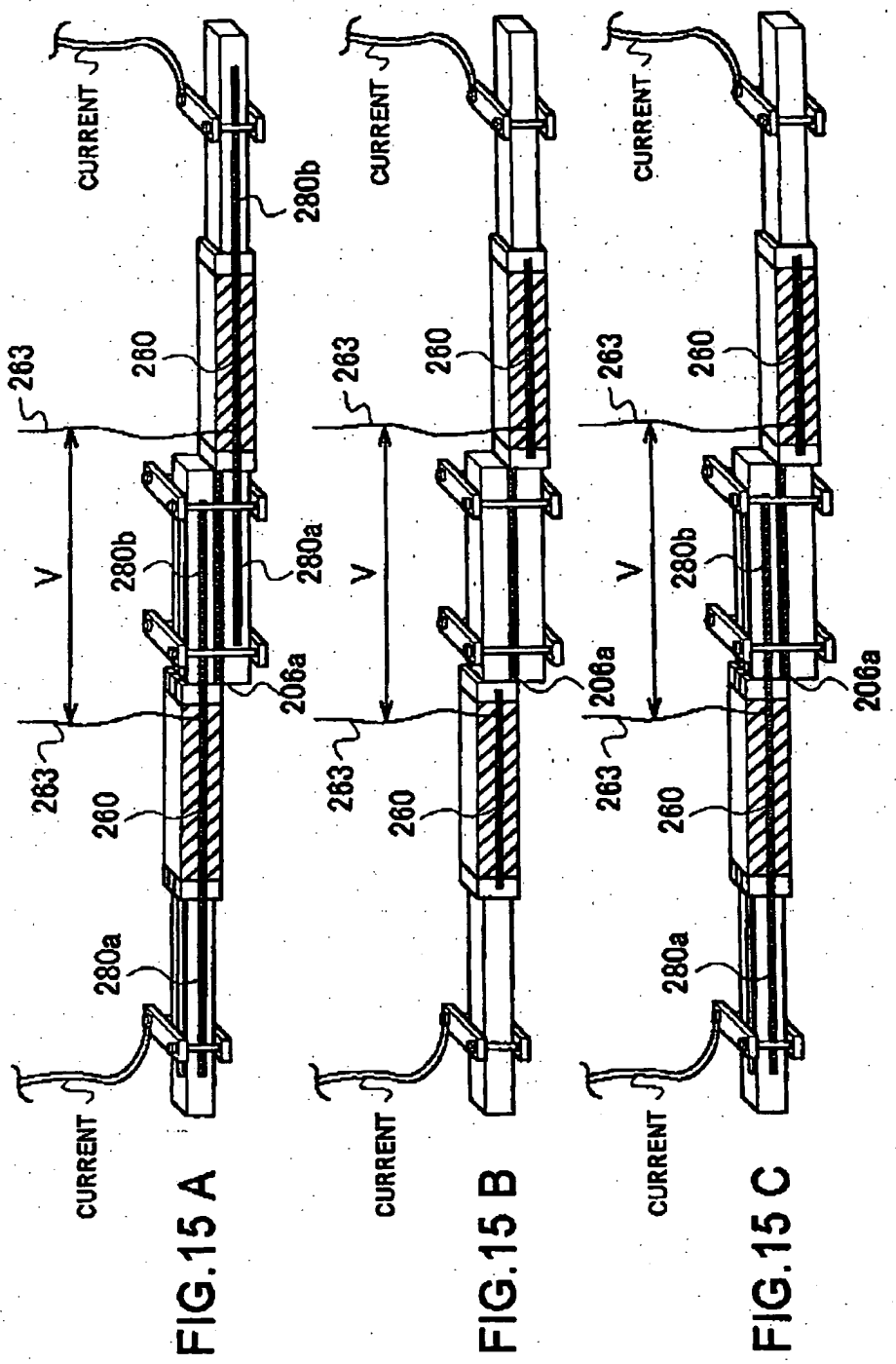


FIG.15 A

FIG.15 B

FIG.15 C

FIG.16

	TEMPERATURE 77 K RESISTANCE VALUE [μΩ]	TEMPERATURE 4.2 K RESISTANCE VALUE [μΩ]
OVERLAYING OF ELECTRODES WITH PLACEMENT OF SUPERCONDUCTOR	0.28	0.2
OVERLAYING OF ELECTRODES WITHOUT PLACEMENT OF SUPERCONDUCTOR	3.23	2.6
OVERLAYING OF ELECTRODE WITH PLACEMENT OF SUPERCONDUCTOR AND ELECTRODE WITHOUT IT	1.52	1.22

FIG.17

	TEMPERATURE 77 K RESISTANCE VALUE [μΩ]	TEMPERATURE 4.2 K RESISTANCE VALUE [μΩ]
OVERLAYING OF ELECTRODES WITH PLACEMENT OF SUPERCONDUCTOR	0.27	0.21
OVERLAYING OF ELECTRODES WITHOUT PLACEMENT OF SUPERCONDUCTOR	3.5	2.65
OVERLAYING OF ELECTRODE WITH PLACEMENT OF SUPERCONDUCTOR AND ELECTRODE WITHOUT IT	1.68	1.29

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